

Global, Regional, and National Burden of CKD due to Glomerulonephritis from 1990 to 2019

Year: 2022 | Citations: 2024 | Authors: Ju-Lan Hu, Runjiang Ke, Wilhem M. S. Teixeira, Yimin Dong, R. Ding

Abstract

Visual Abstract Background CKD is becoming a major human health concern. Limited quantitative assessments of the burden of CKD due to glomerulonephritis have been performed. We performed a comprehensive analysis of the disease burden to update the epidemiology of this disease. Methods Incidence, prevalence, deaths, and disability-adjusted life-years (DALYs) data and percent changes in these indicators were extracted from Global Burden of Disease Study 2019 to analyze the burden of CKD due to glomerulonephritis. Results Globally, there were 606,300 (95% uncertainty interval [UI], 560,100 to 658,100) incident patients, 17,300,000 (95% UI, 16,100,000 to 18,600,000) prevalent patients, 183,700 (95% UI, 146,300 to 228,900) deaths, and 6,900,000 (95% UI, 5,900,000 to 8,100,000) DALYs of CKD due to glomerulonephritis in 2019. Compared with those in 1990, the numbers of incident patients, prevalent patients, deaths, and DALYs increased by 77%, 81%, 100%, and 66%, respectively. Most of the disease burden was concentrated in countries with lower sociodemographic index. In Central Latin America, the disease burden was much higher than expected on the basis of its sociodemographic index. Decomposition analysis showed that population aging and growth were the two major drivers of the increase in DALYs. Frontier analysis revealed considerable opportunities to reduce the age-standardized DALYs in the middle of the sociodemographic-index spectrum. Although middle-aged and elderly individuals accounted for the majority of the disease burden, the highest incidence rate was observed in children aged 1–4 years. Conclusions The disease burden of CKD due to glomerulonephritis has increased worldwide, especially in regions and countries with lower sociodemographic indexes.